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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,463	02/04/2002	Vahid Orboubadian	YMEDIA.009A	6384
28112	7590	09/09/2005	EXAMINER	
GEORGE O. SAILE & ASSOCIATES			JERABEK, KELLY L	
28 DAVIS AVENUE			ART UNIT	
POUGHKEEPSIE, NY 12603			PAPER NUMBER	
			2612	

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/067,463

Applicant(s)

ORBOUBADIAN, VAHID

Examiner

Kelly L. Jerabek

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 17-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/7/2002</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

Applicant's election with traverse of group I (claims 1-16 and 26) in the reply filed on 7/8/2005 is acknowledged. The traversal is on the ground(s) that the field of search must necessarily cover both the Group I class/subclass 348/231.3 and the Group II class/subclass 382/254. This is not found persuasive because the claims of Group I deal with a method of embedding camera information and image capture information in a digital image and the claims of Group II deal with a method of enhancing an image (image processing) based on camera characteristic information and camera setting information. The field of search for Group I will not include class/subclass 382/254.

The requirement is still deemed proper and is therefore made FINAL.

Claims 17-25 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7/8/2005.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1, 5-8, 10-13, and 26 rejected under 35 U.S.C. 102(e) as being anticipated by Narayanaswami et al. US 2003/0011684.**

Re claim 1, Narayanaswami discloses a method of embedding camera information and image capture related information in a digital form of an image, comprising: receiving information on a first static camera characteristic (camera capable of being in portrait or landscape mode indicates that the image sensor of the camera is rectangular in shape) (page 3, paragraph 35); receiving camera setting information (focal length, focus distance, frame number, image quality, flash status, light meter readings, etc.) related to a first captured digitized image (page 3, paragraphs 34-35); generating an encryption key based at least in part on the first static characteristic (page 5, paragraph 46); embedding a watermark in said first captured digitized image,

Art Unit: 2612

wherein the watermark contains at least a portion of the information on the first static characteristic and at least a portion of the camera setting information related to said first captured digitized image; and encrypting the watermark using the encryption key (page 4, paragraph 42 - page 5, paragraph 48).

Re claim 5, Narayanaswami states that the camera setting information includes information related to the flash intensity used to capture the digitized image (page 3, paragraph 34).

Re claim 6, Narayanaswami states that information related to the ambient light present when the image was captured is included in the watermark (page 3, paragraph 34).

Re claim 7, Narayanaswami states that a number of dynamically measured camera characteristics are included in the watermark (page 3, paragraph 34).

Re claim 8, Narayanaswami discloses a digital camera system, comprising: an imager (page 3, paragraph 32); a first static camera characteristic (imager shape) associated with the imager (camera capable of being in portrait or landscape mode indicates that the image sensor of the camera is rectangular in shape) (page 3, paragraph 35); a first variable camera setting; (focal length, focus distance, frame number, image quality, flash status, light meter readings, etc.) (page 3, paragraphs 34-

Art Unit: 2612

35); a watermark generator used to embed in the form of a watermark at least one of said first static camera characteristic and said first variable camera setting information in an image captured by the camera; and a key generator configured to generate an encryption key used to encrypt a watermark (page 4, paragraph 42 - page 5, paragraph 48).

Re claim 10, the watermark disclosed by Narayanaswami is visually imperceptible (page 5, paragraph 45).

Re claims 11-13, Narayanaswami states that the variable camera settings to be watermarked consist of shutter speed, aperture setting, flash setting as well as other camera settings (page 4, paragraph 43).

Re claim 26, see claim 1. Narayanaswami also states that the digitized image and the data set may be transmitted (page 4, paragraph 41).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 2-4 and 14-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswami et al.**

Re claims 2-4, Narayanaswami discloses all of the limitations of claim 1 above. Additionally, Narayanaswami states that a first static camera characteristic (image sensor shape) (camera capable of being in portrait or landscape mode indicates that the image sensor of the camera is rectangular in shape) as well as many other parameters may be embedded as a watermark in a digital image (page 3, paragraph 35; page 4, paragraph 43). However, Narayanaswami does not specifically state that camera parameters such as camera image sensor bad pixel characteristics, sensor current values, and image sensor sensitivities are embedded as a watermark in a digital image. The Examiner takes **Official Notice** that camera parameters such as camera image sensor bad pixel characteristics, sensor current values, and image sensor sensitivities were well known in the art at the time the invention was made. Therefore, it would have been obvious for one skilled in the art to have been motivated to record and watermark camera parameters such as camera image sensor bad pixel characteristics, sensor current values, and image sensor sensitivities into a digital image in addition to the parameters disclosed by Narayanaswami that are watermarked into a digital image. Doing so would provide a means for accessing the camera parameters present when the image was taken when accessing the image itself.

Re claims 14-16, Narayanaswami discloses all of the limitations of claim 8 above. Additionally, Narayanaswami states that a first static camera characteristic (image sensor shape) (camera capable of being in portrait or landscape mode indicates that the image sensor of the camera is rectangular in shape) as well as many other parameters may be embedded as a watermark in a digital image (page 3, paragraph 35; page 4, paragraph 43). However, Narayanaswami does not specifically state that camera parameters such as imager current, defective pixels associate with the imager, and gamma information are embedded as a watermark in a digital image. The Examiner takes **Official Notice** that camera parameters such as imager current, defective pixels associate with the imager, and gamma information were well known in the art at the time the invention was made. Therefore, it would have been obvious for one skilled in the art to have been motivated to record and watermark camera parameters such as imager current, defective pixels associate with the imager, and gamma information into a digital image in addition to the parameters disclosed by Narayanaswami that are watermarked into a digital image. Doing so would provide a means for accessing the camera parameters present when the image was taken when accessing the image itself.

**Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswami et al. in view of Isnardi et al. US 6,037,984.**



Re claim 9, Narayanaswami discloses all of the limitations of claim 8 above. However, Narayanaswami states that the stamping/watermarking information is invisible.

Isnardi states that digital watermarks are well known in the art. Isnardi states that although watermarks are generally invisible, in some application, it is desirable to produce a visible watermark that can be removed by an authorized image decoder (col. 1, lines 11-25). Therefore, it would have been obvious for one skilled in the art to have been motivated to include a visually perceptible watermark as disclosed by Isnardi in the camera capable of watermarking camera parameters into digital image data as disclosed by Narayanaswami. Doing so would provide a means for visibly displaying a watermark on an image and only allowing it to be removed by an authorized image decoder (Isnardi: col. 1, lines 21-25).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mintzer et al. (US 5,875,249) discloses an invisible image watermark for image verification. The information regarding embedding watermarks in images is relevant material.

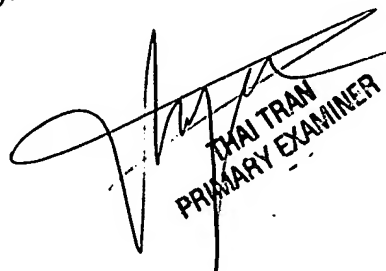
### **Contacts**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is **(571) 272-7312**. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached at **(571) 272-<sup>7382</sup>7564**. The fax phone number for submitting all Official communications is **(571) 273-8300**. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at **(571) 273-7312**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJ

  
THAI TRAN  
PRIMARY EXAMINER